

Work Order ID 158640

Tuesday, March 28, 2017 1:30:59 PM

158640

Rush
U/R

Page 1

Item ID: D4842-4 **POSITIVE RECALL** Accept ***N9000040100*** Setup Start ***NS1***
 Revision ID: URF 16-692 Stop ***NS2***
 Item Name: Lower Cutter Body, RH

Start Date: 4/3/2017 Start Qty: 4.00 ***4*** Cust Item ID: **F.A.I.R. COMPLETION**
 Required Date: 4/10/2017 Req'd Qty: 4.00 ***4*** Customer: **REQUIRED**
 Reference: SCHEDULED/C *Concession 400000061786*

Approvals: Process Plan: *[Signature]* Date: **MAR 28 2017** Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D4842	B U/R <i>OK 4/17/18</i>								
100	BAND SAW	0.00				<u>4</u>	<u>0</u>		DAS 45 17-3-28 9-89
100									
Bandsaw	Memo	0.01							
Jeaspa Bandsaw	Cut Blank at 7.250"								
110	* SEE CONCESSION * HAAS CNC VERTICAL MACHINING #1	0.62				<u>4</u>	<u>0</u>		DAS 45 17-3-28 9-89
110									
HAAS 1	Memo	1.57							
HAAS CNC vertical machine #1	1-Machine per folio FB192 DWG REV: <u>B</u> FOLIO REV: <u>AA</u> <i>PTD</i>								
	2- deburr and break all sharp edges								

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: <u>158640</u> Part No. <u>D48424</u> NCR No. _____		DISPOSITION Rework ☒ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date: <u>17/3/28</u>		Step #: <u>110</u>		QTY Effective: _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				DAS 12 17/3/28 0.00 Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Dim 10.9 ^{+0.25} _{-0.00} is now 10.8mm ^{+0.00} _{-0.20} (0.425 ^{+0.000} _{-0.008})				Acceptable per Leonardo concession					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER: _____							

Work Order ID 158640

Tuesday, March 28, 2017 1:31:00 PM

158640

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Item ID: D4842-4 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: URF 16-692 Stop ***NS2***
Item Name: Lower Cutter Body, RH
Start Date: 4/3/2017 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 4/10/2017 Req'd Qty: 4.00 ***4*** Customer:
Reference: SCHEDULED/C

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 *120* QC Quality Control	QC2- Inspect parts off machine FAI/FAIB Memo	0.00 0.00				<u>4</u>	<u>0</u>		DAS 45 9-89 17-3-29
130 *130* QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.00				<u>4</u>	<u>0</u>		DAS 14 9-89 17/03/29
140 *140* Outsource4 Outsource process - Anodize	Outsource process-Anodize per QSI017 4.1.10.1 Memo Issue P/O to ATG : <u>35785</u> 1- Black Anodize as per Dwg D4842 2- PRIME AS PER DWG, SEE NOTE #2 Certification of Comformity is required	0.00 0.00				<u>4</u>		MAR 29 2017	DAS 13 9-89

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____		
Description Work Order Deviation				Disposition					
240 24 BRG									
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
OTHER : _____									

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Item ID: D4842-4 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: URF 16-692 Stop ***NS2***
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 Required Date: 4/10/2017 Req'd Qty: 4.00 ***4*** Customer:
 Reference: SCHEDULED/C

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	Receive & Inspect for Damage & Mat'l Certs	0.00							
150									
Packaging	Memo	0.00							
Packaging									
155	QC5- Inspect part completeness to step on W/O	0.00							
155									
QC	Memo	0.00							
Quality Control	35 M/IS								
180	Identify as per dwg & Stock Location: <u>CK129</u>	0.00							
180									
Packaging	Memo	0.00							
Packaging	***IDENTIFY WITH DART P/N USING FINE POINT PERMANENT INK MARKER***								

* ARC must be created by QA
 * ARC must contain concession Number.
 All Parts must be labeled w/ concession Number.
 x FAIR must be completed

4x 8017-4-4.

QC APPROVAL
 ONLY
 ④ 170405

APR 05 2017

POSITIVE RECALL
 EFFECTIVE 4/4/13 AUTH 5
 RELEASED 3 DATE 10/1/13

CONCESSION 400000061786

DAS 9 9-89

DAS 6 9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
JAVORPRA 00		JAVORPRA 00		Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

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Page 4

Item ID: D4842-4 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: URF 16-692 Stop ***NS2***
Item Name: Lower Cutter Body, RH
Start Date: 4/3/2017 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 4/10/2017 Req'd Qty: 4.00 ***4*** Customer:
Reference: SCHEDULED/C

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	QC21- Final Inspection - Work Order Release	0.00							
190									
QC	Memo	0.00							
Quality Control									

17/4/16 JF

DAS
21
9-89

APR 05 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

Tuesday, March 28, 2017 1:31:04 PM

Page 1

Work Order ID: 158640

158640

Parent Item: D4842-4

D4842-4

Parent Item Name: Lower Cutter Body, RH

Start Date: 4/3/2017

Required Date: 4/10/2017

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP REV: A NEW ISSUE JFS 13/04/30 VERIFY BY: JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M7075T6B5.000X1.000		Purchased			No	100	f	6.1250	0.605	2.547368			

M7075T6B5 000X1 000

7075-T6 BAR 5.000" X 1.000"

Location

MAT005

M136904

Loc Qty

6.125

6.125

Loc Code

2.548 ^{PS}

DAS
45
9-89

17-3-28

DQA: _____ Date: _____



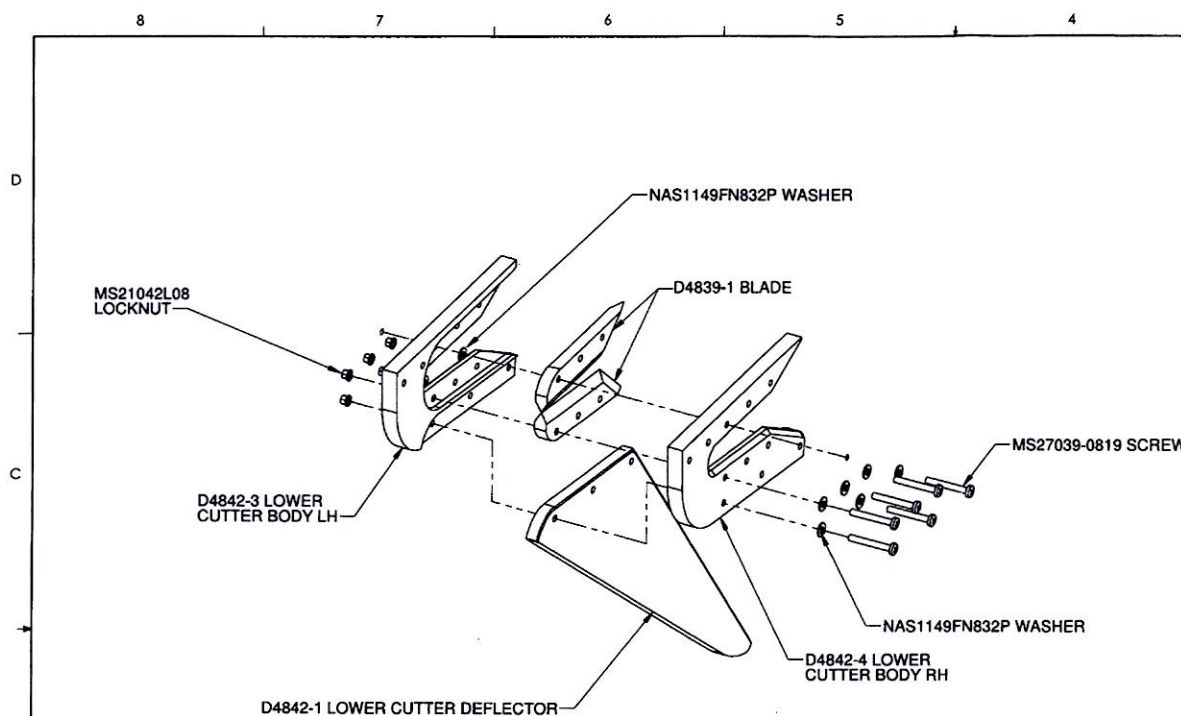
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

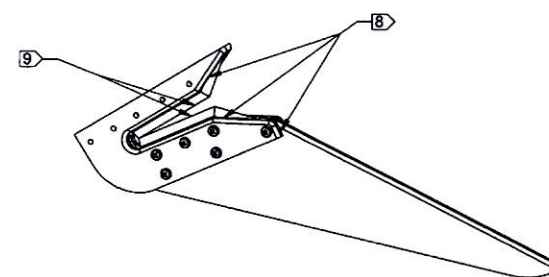
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong		
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions		
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance		
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect		
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing		
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved		
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing		
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish		
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread		
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence		
Past Expiry Date ☐	☐ Manufacturing Process	OTHER : _____					
Misidentified ☐	☐ Past Due						



ITEM	QTY -041	P/N	DESCRIPTION
	X	D4842-041	LOWER CUTTER ASSY
1	2	D4839-1	BLADE
2	1	D4842-1	LOWER CUTTER DEFLECTOR
3	1	D4842-3	LOWER CUTTER BODY LH
4	1	D4842-4	LOWER CUTTER BODY RH
5	6	MS21042L08	LOCKNUT
6	6	MS27039-0819	SCREW
7	12	NAS1149FN832P	WASHER
8	A/R	LOCTITE 598	RTV SEALANT



- NOTES:
- 1) MATERIAL: N/A
 - 2) FINISH: N/A
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: N/A
 - 5) BREAK SHARP EDGES: N/A
 - 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4842-041", AGUSTA WESTLAND KIT NUMBER "TBD", REVISION, BATCH NUMBER AND MANUFACTURE DATE, USING AN X-TENSION STAMP, AS PER QSI 044 METHOD 6.2
 - 7) WEIGHT: 2.79 lbs (1.26 KGS)
 - 8) APPLY RTV SEALANT TO ALL FAYING SURFACES UPON ASSEMBLY
 - 9) CUTTING EDGE INTENDED TO BE SHARP. DO NOT BREAK SHARP EDGE.

SHOP
RETU
ENGIN
UNCONTR
SUBJECT TO
WITHOUT
WORK
NO. 158640 MAR 28 2017

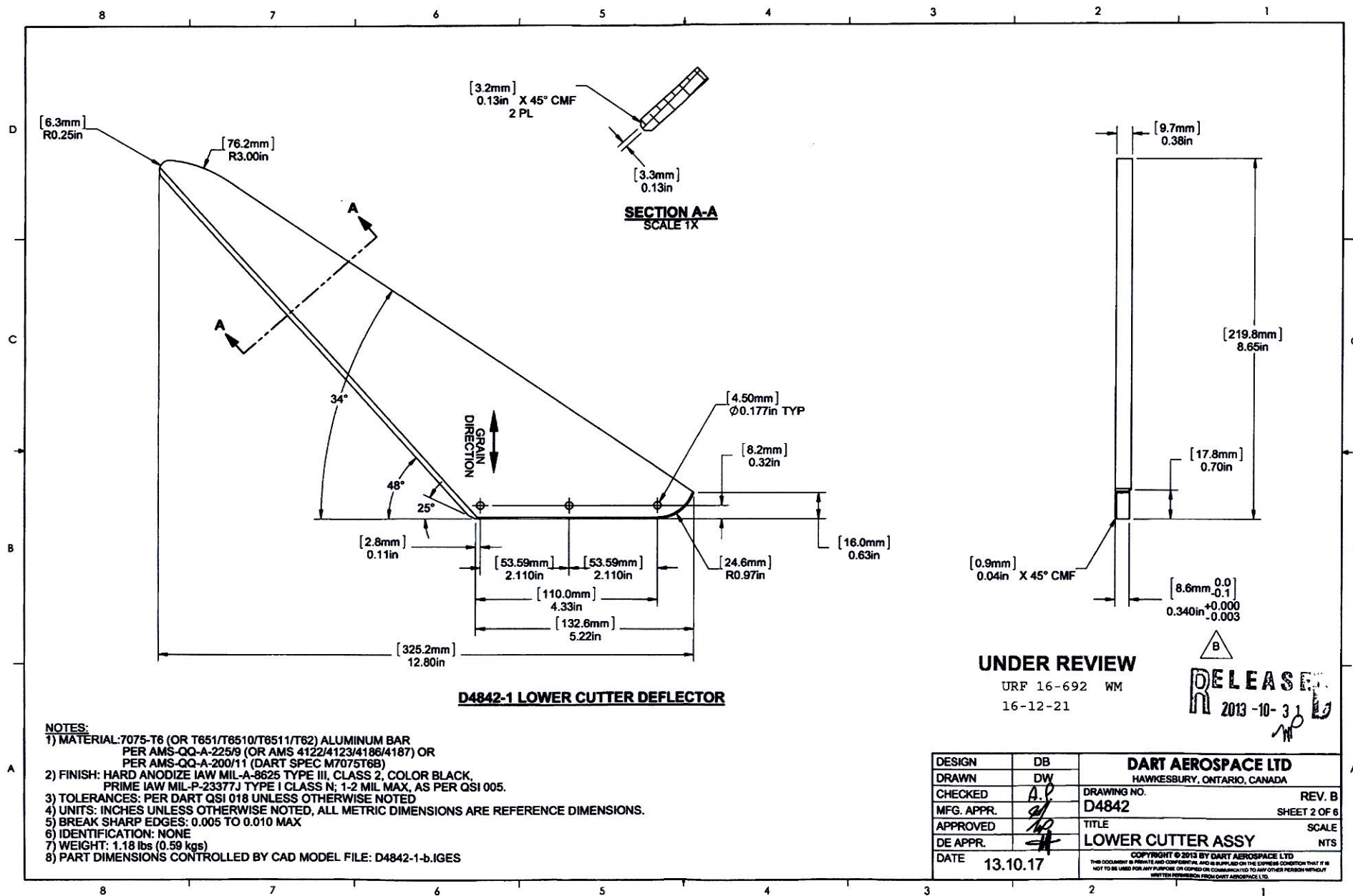
D4842-041 LOWER CUTTER ASSEMBLY

UNDER REVIEW

URF 16-692 WM
16-12-21

RELEASED
2013-10-31

B	CORRECT TOLERANCES (ZN B1-2) (ZN B1-3, D2-3) (ZN B7-5, D7-5)	DW	13.10.17
A	NEW RELEASE	DB	13.05.23
REV.	DESCRIPTION	BY	DATE
DESIGN	DB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	DW		
CHECKED	A.P.	DRAWING NO.	REV. B
MFG. APPR.	at	D4842	SHEET 1 OF 6
APPROVED	at	TITLE	SCALE
DE APPR.	at	LOWER CUTTER ASSY	NTS
DATE	13.10.17	COPYRIGHT © 2013 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



- NOTES:**
- 1) MATERIAL: 7075-T6 (OR T651/T6510/T6511/T62) ALUMINUM BAR
PER AMS-QQ-A-225/9 (OR AMS 4122/4123/4186/4187) OR
PER AMS-QQ-A-200/11 (DART SPEC M7075T6B)
 - 2) FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK,
PRIME IAW MIL-P-23377J TYPE I CLASS N; 1-2 MIL MAX, AS PER QSI 005.
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED, ALL METRIC DIMENSIONS ARE REFERENCE DIMENSIONS.
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: NONE
 - 7) WEIGHT: 1.18 lbs (0.59 kgs)
 - 8) PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: D4842-1-b.IGES

UNDER REVIEW
URF 16-692 WM
16-12-21

RELEASE
2013-10-30

DESIGN	DB	DART AEROSPACE LTD	
DRAWN	DW	HAWKESBURY, ONTARIO, CANADA	
CHECKED	A.P.	DRAWING NO.	REV. B
MFG. APPR.	1/1	D4842	SHEET 2 OF 6
APPROVED	1/1	TITLE	SCALE
DE APPR.	1/1	LOWER CUTTER ASSY	NTS
DATE	13.10.17	COPYRIGHT © 2013 BY DART AEROSPACE LTD	
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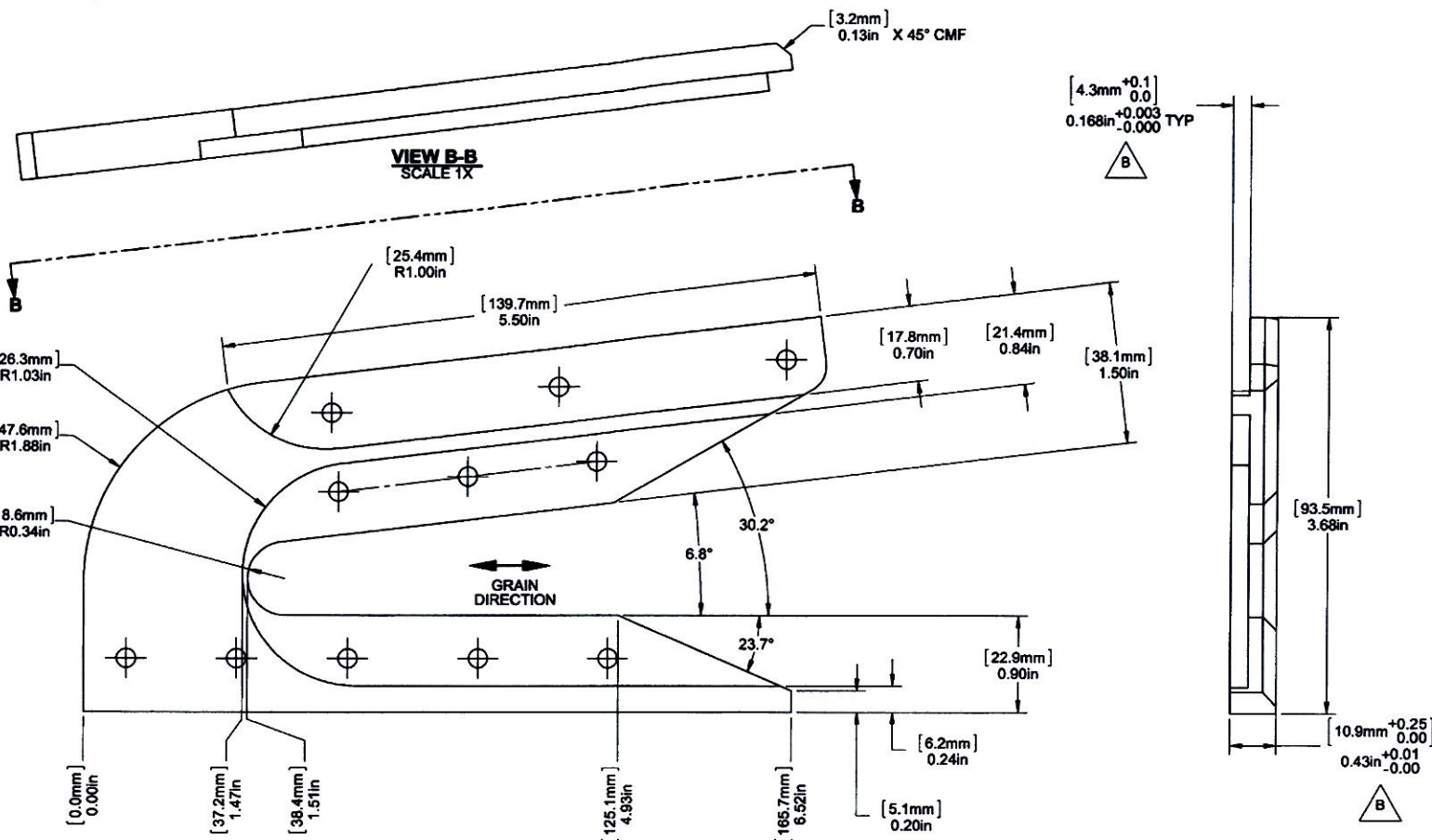
8 7 6 5 4 3 2 1

D

C

B

A



VIEW B-B
SCALE 1X

D4842-3 LOWER CUTTER BODY LH

UNDER REVIEW

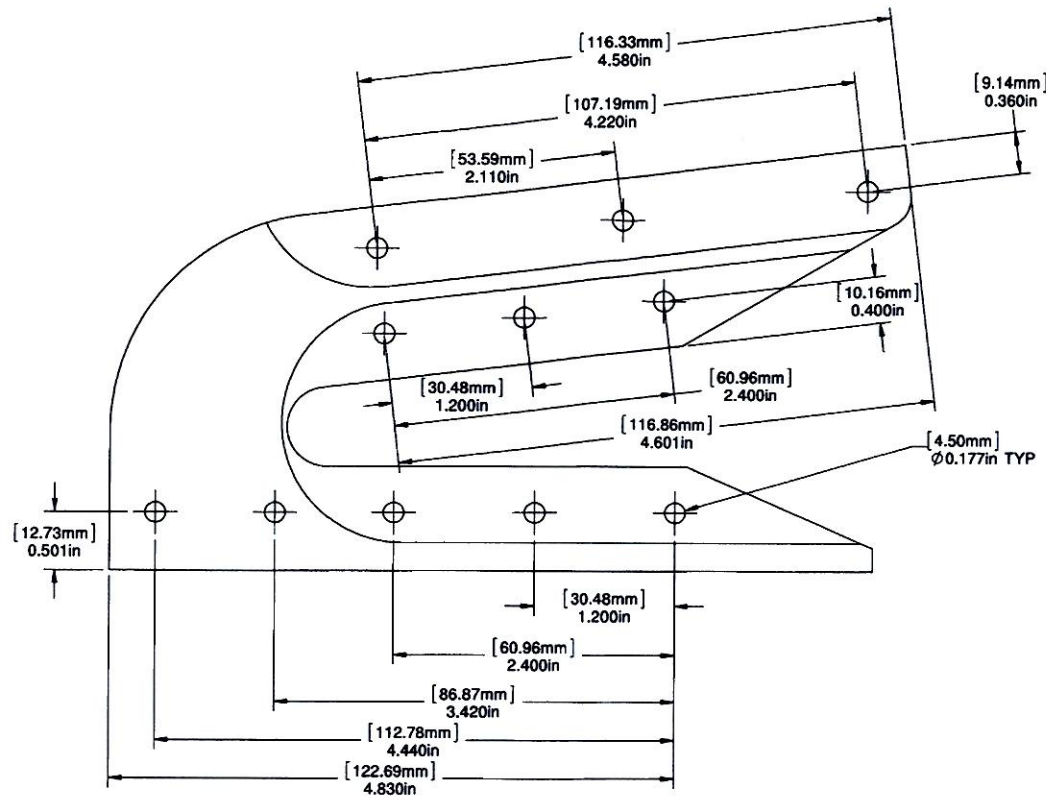
URF 16-692 WM
16-12-21

RELEASED
2013-10-31

- NOTES:
- 1) MATERIAL: 7075-T6 (OR T651/T6510/T6511/T62) ALUMINUM BAR
PER AMS-QQ-A-225/9 (OR AMS 4122/4123/4186/4187) OR
PER AMS-QQ-A-200/11 (REF DART SPEC M7075T6B)
 - 2) FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK, AS PER QSI 017;
PRIME IAW MIL-P-23377J TYPE I CLASS N; 1-2 MIL MAX, AS PER QSI 005.
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED, ALL METRIC DIMENSIONS ARE REFERENCE DIMENSIONS.
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: NONE
 - 7) WEIGHT: 0.49 lbs (0.22 kgs)
 - 8) PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: D4842-3-b.IGES

DESIGN	DB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	DW		
CHECKED	A.P.	DRAWING NO.	REV. B
MFG. APPR.	2/	D4842	SHEET 3 OF 6
APPROVED	1/2	TITLE	SCALE
DE APPR.	1/	LOWER CUTTER ASSY	NTS
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8 7 6 5 4 3 2 1



D4842-3 LOWER CUTTER BODY LH
(AUXILIARY VIEW)

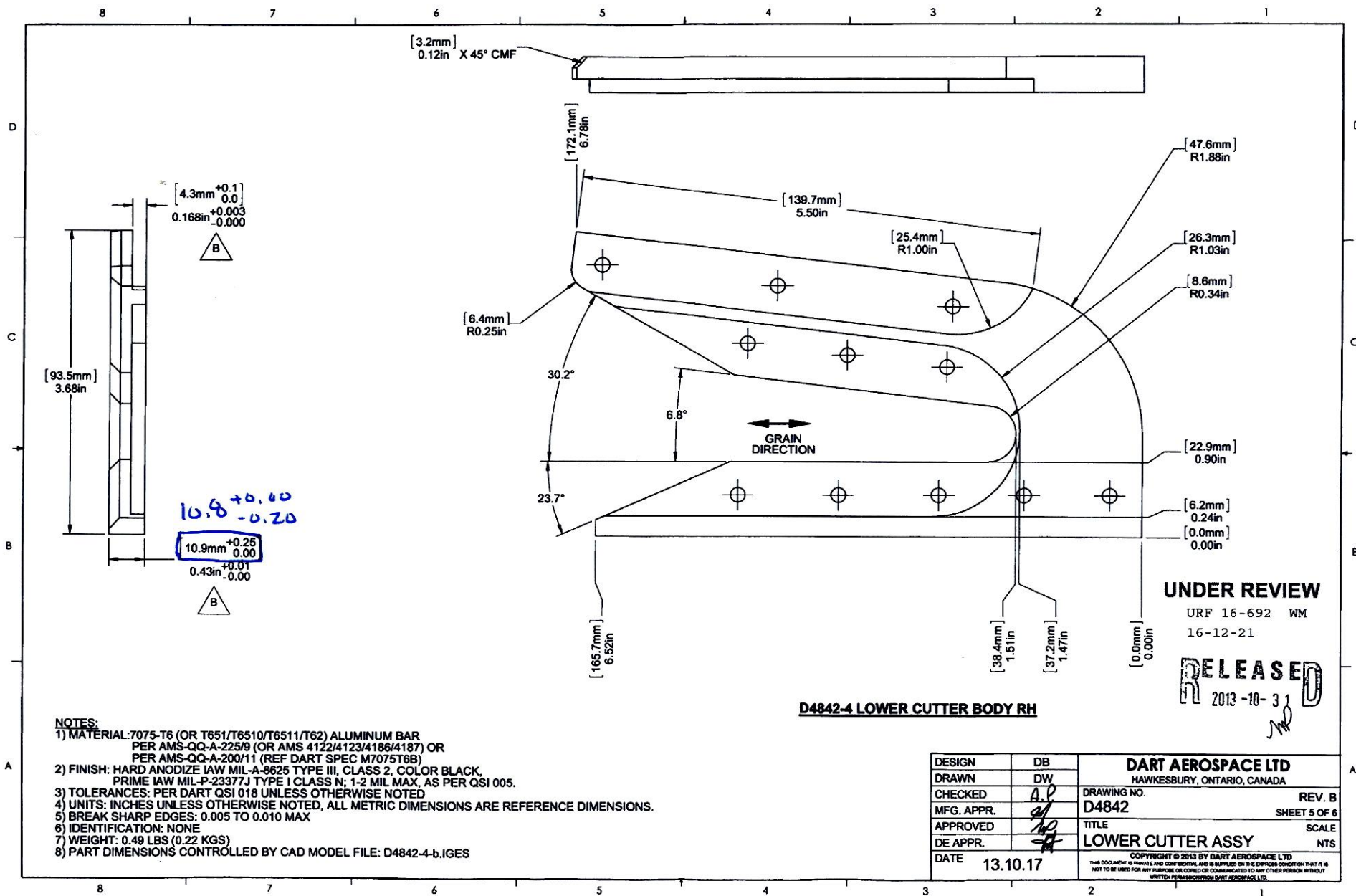
UNDER REVIEW

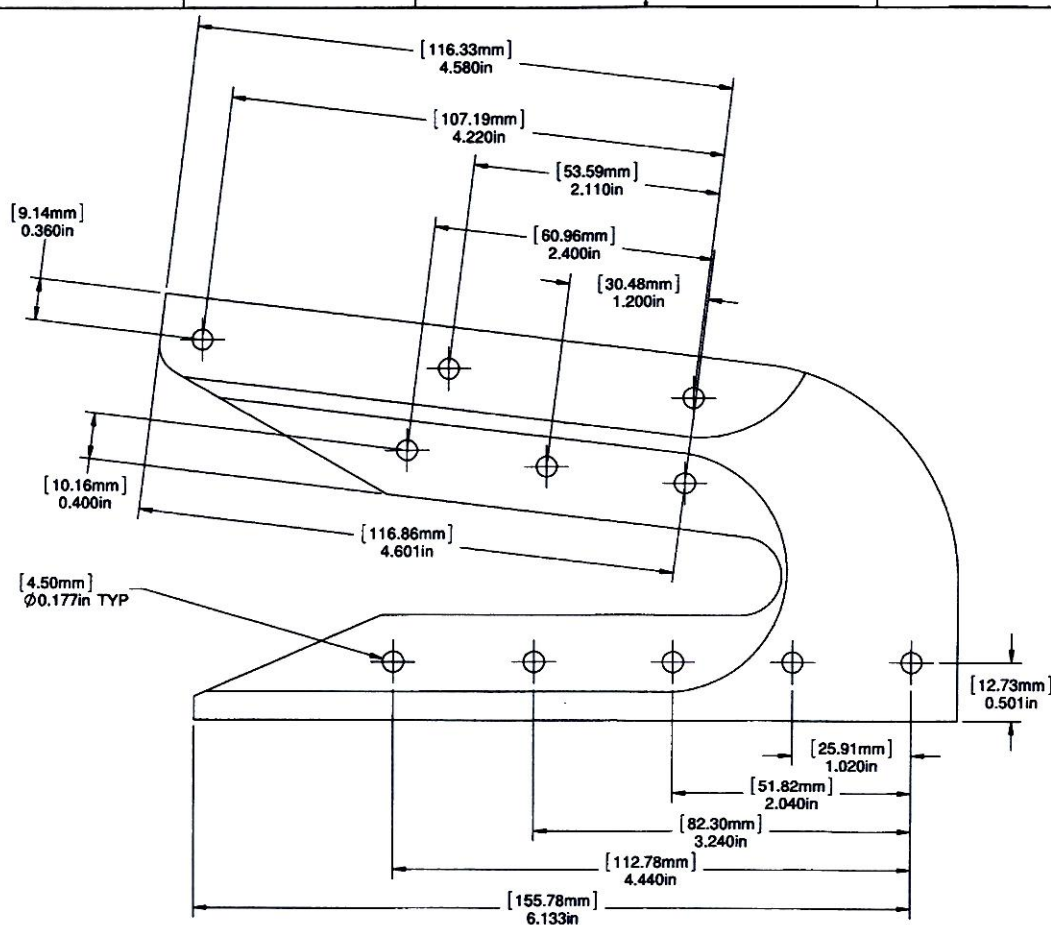
URF 16-692 WM

16-12-21

RELEASE
2013-10-31

DESIGN	DB	DART AEROSPACE LTD	
DRAWN	DW	HAWKESBURY, ONTARIO, CANADA	
CHECKED	A.P.	DRAWING NO.	REV. B
MFG. APPR.	21	D4842	SHEET 4 OF 6
APPROVED	14	TITLE	SCALE
DE APPR.	14	LOWER CUTTER ASSY	NTS
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UNDER REVIEW

URF 16-692 WM
16-12-21

RELEASE
2013-10-31

D4842-4 LOWER CUTTER BODY RH
(AUXILLIARY VIEW)

DESIGN	DB	DART AEROSPACE LTD	
DRAWN	DW	HAWKESBURY, ONTARIO, CANADA	
CHECKED	A.P.	DRAWING NO. D4842	REV. B
MFG. APPR.		SHEET 6 OF 6	
APPROVED		TITLE	SCALE
DE APPR.		LOWER CUTTER ASSY	NTS
DATE	13.10.17	COPYRIGHT © 2013 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

		Supplier Concession				PAGE 1 of 2	PLANT Leonardo Helic. - Vergiate	
Supplier NC N.	AWC 006/01	Date	02.02.2017	AW Concession	400000061786	Purchase Order	4801373666	
P/N	6F9540V00231			Grade/Category	NC	Drawing Issue		
Part Description	PROTECTR, CCP ASSY LOWER			Batch Quantity	20,000	Defective Quantity	20,000	
AW NC	GUIDO BRUSCINO					A/C Type/Model	AW6	
Supplier	DART AEROSPACE LTD					Contract		
Defect FO01 - Wrong dimensions - * 02.02.2017 09:40:16 GUIDO BRUSCINO (40067) * see supplier document attached - B/N quantities and PO's listed in the								
Cause of Defect				Repetitiveness (same P/N - Defect Code)		NO ☒ YES ☐ Follow		
ENGINEERING Evaluation and Proposal								
Engineering Evaluations, including Specialist inputs: * 10.02.2017 18:01:48 MARCELLO STEFANELLI (9273) * The part is acceptable with the action proposed by the supplier applied.				Investigation Report n.		Compliance Report n.		
Classification of Deviation from Type Design i.a.w. EASA Part 21A.91 : Minore/B								
Defect effect				Limitations				
	Before Repair		After Repair					
Safety	☐ YES	☐ YES	☐ YES	☐ NO	☐ YES (to specificity) ☒ NO			
Life or Duration	☐ YES	☐ YES	☐ YES	☐ NO				
Strenght	☐ YES	☐ YES	☐ YES	☐ NO				
Performances	☐ YES	☐ YES	☐ YES	☐ NO				
Interchangeability	☐ YES	☐ YES	☐ YES	☐ NO				
Reliability	☐ YES	☐ YES	☐ YES	☐ NO				
Maintainability	☐ YES	☐ YES	☐ YES	☐ NO				
Installability	☒ YES	☐ YES	☒ YES	☐ NO				
Testability	☐ YES	☐ YES	☐ YES	☐ NO				
Only Appearance	☐ YES	☐ YES	☐ YES	☐ NO				
No Effect	☐ YES	☐ YES	☐ YES	☐ NO				
Repair Proposal: * 10.02.2017 18:01:48 MARCELLO STEFANELLI (9273) * See attached supplier document.					Decision ☐ Use rep. with spec.repair(not yet applied) ☒ Use repaired with known repair(yet applied) ☐ Use As Is ☐ Use repaired for tests only(see Limitations) ☐ Use As Is for tests only(see Limitations) ☐ Scrap			
Concession Classification		☐ MAJOR ☒ MINOR		Re-submit after Repair		☐ YES ☒ NO		
Mark part with Concession		☒ NO ☐ YES		Method :				
ATE	MARCELLO STEFANELLI			CPE			Date	10.02.2017
Checks and tests to be performed								
Repair registration		with repair WO ☒		Number:				
Repair Evaluation:								
Final Decision								
S/N	Use As Is (UTI)	Use Repaired (R/L)	Scrap (SCA)	S/N	Use As Is (UTI)	Use Repaired (R/L)	Scrap (SCA)	
	☐	☐	☐		☐	☐	☐	
	☐	☐	☐		☐	☐	☐	
	☐	☐	☐		☐	☐	☐	
	☐	☐	☐		☐	☐	☐	
	☐	☐	☐		☐	☐	☐	
	☐	☐	☐		☐	☐	☐	
	☐	☐	☐		☐	☐	☐	
	☐	☐	☐		☐	☐	☐	
	☐	☐	☐		☐	☐	☐	
Not Serialized	Use As Is (Q.ty)	Use Repaired (Q.ty)	Scrap (Q.ty)					
Role	AW ATE	AW CPE	Inspection Clearance Repair	Quality	Customer	MoD or Authority Representative		
Signature	MARCELLO STEFANELLI							
Date	10.02.2017							

		Supplier Concession			PAGE 2 of 2	PLANT Leonardo Helic. - Vergiate	
Supplier NC N.	AWC 006/01	Date	02.02.2017	AW	400000061786	Purchase Order	4801373666
DEFECT 0001 FO01 Wrong dimensions attachment							

Manuf. Doc. N.	AWC 006	Date		AW Doc. N.		Purchase Order	4800671131 4800722284 4801147764 4801186922 4801218851 4801288960 4801373666
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AW P/N	6F9540V00231	S/N / Batch Number	B109195 Qty. (1) B133355 Qty. (2) B134314 Qty. (1) B134315 Qty. (1) B134842 Qty. (1) B137492 Qty. (1) B137355 Qty. (2) B137816 Qty. (1) B137818 Qty. (1) B137817 Qty. (1) B140379 Qty. (3) B140381 Qty. (2) B147002 Qty. (2) B150786 Qty. (1)	Grade	A	AW Drawing Issue	B
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Description	Lower Cutter Assy	Batch Qty	20	Defective Qty	20
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Manufacturer	Dart Aerospace	Model	AW169
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Defect(s) Description

Leonardo has informed Dart that there are interference issues installing the lower cable cutter D4842-041 onto the Leonardo interface bracket.

Department	Inspector	Signature	Date
Quality	DAS 16 9-89		2017/02/01

Defect(s) Cause

The Lower Cutter body has a dimension of 10.9 +0.25/-0.00 mm. This dimension was reported as part of the approved FAI and has been met with all delivered product.

Department	Inspector	Signature	Date
Quality	DAS 16 9-89		2017/02/01

Corrective Action

Complete
Before

In order to mitigate the interference issue for Leonardo, Dart is proposing to remove sufficient material to make the overall installation dimension at 22.15 mm +0.05/-0.35.

Department	Inspector	Signature	Date
Quality	DAS 16 9-89		2017/02/01

For "MANUFACTURER" SUPPLIERS ONLY
ENGINEERING evaluation and proposal

Engineering evaluation

 Investigation report n.....
 Compliance report n.....

Dart's position is that this change will not impact the structural substantiation presented in Report DA169-4 for the lower cutter body since this is not a section with the lowest margin. Therefore removing 0.3 mm max from each part will not impact the structural integrity of the lower cutter assembly. The dimension on the cutter body part D4842-3/-4 will be 10.80 +0.00/-0.200.

The dimension change of the two lower cutter body parts mating, plus the sealant, anodize and primer layers will be defined as a dimension of 22.15 +0.05/-0.35 mm on the assembled lower cutterbody and will be incorporated into the D4842 drawing for inspection.

	Defect effects		Limitations
	Before any repair	After any repair	
Safety	☐ yes	☐ yes ☐ no	☐ yes (specify) ☒ no
Life	☐ yes	☐ yes ☐ no	
Strength	☐ yes	☐ yes ☐ no	
Performances	☐ yes	☐ yes ☐ no	
Interchangeability	☐ yes	☐ yes ☐ no	
Reliability	☐ yes	☐ yes ☐ no	
Maintainability	☐ yes	☐ yes ☐ no	
Installability	☒ yes	☐ yes ☒ no	
Testability	☐ yes	☐ yes ☐ no	
Only aspect	☐ yes	☐ yes ☐ no	
Repair Proposal None			Decision to use ☐ Use repaired with specific repair ☐ Use repaired with known repair ☐ Use as is ☐ Use repaired for tests (see Limitations) ☐ Use as is for tests (see Limitations) ☒ Scrap
Concession Classification		☒ Major ☐ Minor	Submit after repair
		☐ yes ☐ no	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO35785**

Purchase Order Date 3/29/2017

PO Print Date 4/4/2017

Page Number 1 of 2

Order From :

VC-ATG001

Ship To : DART AEROSPACE LTD

A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE ROAD
ROCKLAND, ON K4K 1T2
CANADA

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 613-446-4544

Ship To Contact

Ship To Phone

Ship Via: VENDOR'S TRUCK

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax # 10127-2607

Terms

Net 30

Currency

CAD

FOB

FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	158641	D4842-3 LOWER CUTTER REV. B	4/4/2017 Yes 4/4/2017		4.00	\$45.00	\$180.00
FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-PRF-23377 TYPE I CLASS N							
Line Total:							\$180.00
2	158640	D4842-4 LOWER CUTTER REV. B	4/4/2017 Yes 4/4/2017		4.00	\$45.00	\$180.00
FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-PRF-23377 TYPE I CLASS N							
Line Total:							\$180.00

SP174-4

PO Instructions: PRIMER IS SUPPLIED BY DART

Note:

4/4/2017



A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE STREET
ROCKLAND, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 913142

Date: 04-Apr-17

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Chantal Lavoie
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms	Ship Via
Quantity	Description
	PLEASE REFERENCE THE PACK LIST NUMBER ON ALL CORRESPONDENCE TO THIS SHIPMENT. IF YOU HAVE ANY QUESTIONS, PLEASE CALL AT (613) 446-4544.
4 ea	Part: D4842-3 Lower Cutter Hard Black Anodize per MIL-A-8625F, Type III, Class 2 Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied) Job: 20878 PO: PO35785 Rev: B Line: 1
4 ea	Part: D4842-4 Lower Cutter Hard Black Anodize per MIL-A-8625F, Type III, Class 2 Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied) Job: 20879 PO: PO35785 Rev: B Line: 2
1 ea	Part: ADMINISTRATION FEE Administrative Fee Job: 20880 PO: PO35785 Rev: N/A Line: 4
DATE: 4/4/17 CERTIFIED SIGNATURE: RECEIVER SIGNATURE: _____ Note: This Packing Slip may contain parts that have been PLATED. Items that are plated may be subject to natural tarnishing and it is suggested that they be inspected within 24 hours of receipt. CERTIFICATE OF CONFORMANCE A.T.G. INDUSTRIES INC. CERTIFIES THAT ALL ITEMS IN THIS SHIPMENT CONFORM TO REQUIREMENTS. MADE IN CANADA.	